



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2013-1029; Directorate Identifier 2013-NM-177-AD; Amendment 39-18042; AD 2014-25-01]

RIN 2120-AA64

Airworthiness Directives; Bombardier, Inc. Airplanes

AGENCY: Federal Aviation Administration (FAA), Department of Transportation (DOT).

ACTION: Final rule.

SUMMARY: We are superseding Airworthiness Directive (AD) 2010-13-04 for certain Bombardier, Inc. Model DHC-8-400 series airplanes. AD 2010-13-04 required modifying the nose landing gear (NLG) trailing arm. This new AD requires installing a new pivot pin retention mechanism. This new AD also adds airplanes to the applicability. This AD was prompted by a report of several missing or damaged pivot pin retention bolts. We are issuing this AD to prevent failure of the pivot pin retention bolt, which could result in a loss of directional control or loss of a NLG tire during take-off or landing.

DATES: This AD becomes effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of a certain other publication listed in this AD as of July 28, 2010 (75 FR 35622, June 23, 2010).

ADDRESSES: You may examine the AD docket on the Internet at <http://www.regulations.gov/#!docketDetail;D=FAA-2013-1029>; or in person at the Docket Management Facility, U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC.

For service information identified in this AD, contact Bombardier, Inc., Q-Series Technical Help Desk, 123 Garratt Boulevard, Toronto, Ontario M3K 1Y5, Canada; telephone 416-375-4000; fax 416-375-4539; email thd.qseries@aero.bombardier.com; Internet <http://www.bombardier.com>. You may view this referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221.

FOR FURTHER INFORMATION CONTACT: Ricardo Garcia, Aerospace Engineer, Airframe and Mechanical Systems Branch, ANE-171, FAA, New York Aircraft Certification Office, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7331; fax 516-794-5531.

SUPPLEMENTARY INFORMATION:

Discussion

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to supersede AD 2010-13-04, Amendment 39-16335 (75 FR 35622, June 23, 2010).

AD 2010-13-04 applied to certain Bombardier, Inc. Model DHC-8-400 series airplanes.

The NPRM published in the Federal Register on December 24, 2013 (78 FR 77615).

Transport Canada Civil Aviation (TCCA), which is the aviation authority for Canada, has issued Canadian Airworthiness Directive CF-2009-29R1, dated August 14, 2013 (referred to after this as the Mandatory Continuing Airworthiness Information, or “the MCAI”), to correct an unsafe condition on certain Bombardier, Inc. Model DHC-8-400 series airplanes. The MCAI states:

Two in-service incidents have been reported on DHC-8 Series 400 aircraft in which the nose landing gear (NLG) trailing arm pivot pin retention bolt (part number NAS6204-13D) was damaged. One incident involved the left hand NLG tire which ruptured on take-off. Investigation determined that the retention bolt failure was due to repeated contact of the castellated nut with the towing device including both the towbar and the towbarless rigs. The loss of the retention bolt allowed the pivot pin to migrate from its normal position and resulted in contact with and rupture of the tire. The loss of the pivot pin could compromise retention of the trailing arm and could result in a loss of directional control due to loss of nose wheel steering. The loss of an NLG tire or the loss of directional control could adversely affect the aircraft during take off or landing.

To prevent the potential failure of the pivot pin retention bolt, Bombardier Aerospace has developed a modification which includes a new retention bolt, a reverse orientation of the retention bolt and a rework of the weight on wheel (WOW) proximity sensor cover to provide clearance for the re-oriented retention bolt.

Since the original issue of this [Canadian] AD [which corresponds to AD 2010-13-04, Amendment 39-16335 (75 FR 35622, June 23, 2010)], there have been several reports of pivot pin retention bolts found missing or damaged. Additional investigation determined that the failures were caused by high contact stresses on the retention bolt due to excessive frictional torque on the pivot pin and an adverse tolerance condition at the retention bolt.

Revision 1 of this [Canadian] AD mandates the installation of a new pivot pin retention mechanism.

You may examine the MCAI in the AD docket on the Internet at

<http://www.regulations.gov/#!documentDetail;D=FAA-2013-1029-0002>.

Comments

We gave the public the opportunity to participate in developing this AD. The following presents the comments received on the NPRM (78 FR 77615, December 24, 2013) and the FAA's response to each comment.

Request to Revise Required Actions of Paragraph (h) of the Proposed AD (78 FR 77615, December 24, 2013)

Horizon Air requested that we revise paragraph (h) of the proposed AD (78 FR 77615, December 24, 2013) to refer to only the specific section of the Accomplishment Instructions of the service information that specifies the steps that correct the unsafe condition and exclude the steps related to the set-up and close-out actions. Horizon Air stated that only Part B. of the Accomplishment Instructions of Bombardier Service Bulletin 84-32-110, Revision A, dated April 8, 2013, contains any corrective actions.

We agree with the commenter's request and rationale for excluding the "Job Set-Up" and "Close Out" sections of Bombardier Service Bulletin 84-32-110, Revision A, dated April 8, 2013. We have revised paragraph (h) of this AD to require accomplishment

of paragraph 3.B., “Procedure,” of the Accomplishment Instructions of Bombardier Service Bulletin 84-32-110, Revision A, dated April 8, 2013.

Request to Provide Credit for Certain Actions

Horizon Air requested that we revise the proposed AD (78 FR 77615, December 24, 2013) to provide credit for accomplishing Goodrich Service Bulletin 47100-32-96. Horizon Air stated that a nose landing gear repaired by Goodrich Landing Gear (or other repair station) using the Goodrich service information would not have any Bombardier service bulletin entered into the maintenance record as the service information that was incorporated.

We do not agree. Paragraph (h) of this AD requires incorporating Bombardier Modsum 4-113749, which is entirely contained in Bombardier Service Bulletin 84-32-110, dated December 21, 2012; or Revision A, dated April 8, 2013; but not in Goodrich Service Bulletin 47100-32-96. The full contents of Bombardier Modsum 4-113749 must be incorporated and noted in the maintenance records. Goodrich Service Bulletin 47100-32-96 is considered to be a portion of the Bombardier Modsum. Bombardier developed the Modsum in consideration of the overall structure and airworthiness of the system. Paragraph (i)(2) of this AD addresses the acceptable service information that we have determined may be used as credit for complying with the requirements of paragraph (h) of this AD to incorporate the Modsum. In addition, operators may apply for an alternative method of compliance (AMOC) under the provisions of paragraph (j)(1) of this AD. We have not changed this final rule in this regard.

“Contacting the Manufacturer” Paragraph in this AD

Since late 2006, we have included a standard paragraph titled “Airworthy Product” in all MCAI ADs in which the FAA develops an AD based on a foreign authority’s AD.

The MCAI or referenced service information in an FAA AD often directs the owner/operator to contact the manufacturer for corrective actions, such as a repair. Briefly, the Airworthy Product paragraph allowed owners/operators to use corrective actions provided by the manufacturer if those actions were FAA-approved. In addition, the paragraph stated that any actions approved by the State of Design Authority (or its delegated agent) are considered to be FAA-approved.

In the NPRM (78 FR 77615, December 24, 2013), we proposed to prevent the use of repairs that were not specifically developed to correct the unsafe condition, by requiring that the repair approval provided by the State of Design Authority or its delegated agent specifically refer to this FAA AD. This change was intended to clarify the method of compliance and to provide operators with better visibility of repairs that are specifically developed and approved to correct the unsafe condition. In addition, we proposed to change the phrase “its delegated agent” to include a design approval holder (DAH) with State of Design Authority design organization approval (DOA), as applicable, to refer to a DAH authorized to approve required repairs for the proposed AD.

No comments were provided to the NPRM (78 FR 77615, December 24, 2013) about these proposed changes. However, a comment was provided for an NPRM having Directorate Identifier 2012-NM-101-AD (78 FR 78285, December 26, 2013). The

commenter stated the following: “The proposed wording, being specific to repairs, eliminates the interpretation that Airbus messages are acceptable for approving minor deviations (corrective actions) needed during accomplishment of an AD mandated Airbus service bulletin.”

This comment has made the FAA aware that some operators have misunderstood or misinterpreted the Airworthy Product paragraph to allow the owner/operator to use messages provided by the manufacturer as approval of deviations during the accomplishment of an AD-mandated action. The Airworthy Product paragraph does not approve messages or other information provided by the manufacturer for deviations to the requirements of the AD-mandated actions. The Airworthy Product paragraph only addresses the requirement to contact the manufacturer for corrective actions for the identified unsafe condition and does not cover deviations from other AD requirements. However, deviations to AD-required actions are addressed in 14 CFR 39.17, and anyone may request the approval for an alternative method of compliance to the AD-required actions using the procedures found in 14 CFR 39.19.

To address this misunderstanding and misinterpretation of the Airworthy Product paragraph, we have changed the paragraph and retitled it “Contacting the Manufacturer.” This paragraph now clarifies that for any requirement in this AD to obtain corrective actions from a manufacturer, the actions must be accomplished using a method approved by the FAA, the TCCA, or Bombardier, Inc.’s TCCA Design Approval Organization (DAO).

The Contacting the Manufacturer paragraph also clarifies that, if approved by the DAO, the approval must include the DAO-authorized signature. The DAO signature indicates that the data and information contained in the document are TCCA-approved, which is also FAA-approved. Messages and other information provided by the manufacturer that do not contain the DAO-authorized signature approval are not TCCA-approved, unless TCCA directly approves the manufacturer's message or other information.

This clarification does not remove flexibility previously afforded by the Airworthy Product paragraph. Consistent with long-standing FAA policy, such flexibility was never intended for required actions. This is also consistent with the recommendation of the Airworthiness Directive Implementation Aviation Rulemaking Committee to increase flexibility in complying with ADs by identifying those actions in manufacturers' service instructions that are "Required for Compliance" with ADs. We continue to work with manufacturers to implement this recommendation. But once we determine that an action is required, any deviation from the requirement must be approved as an alternative method of compliance.

Other commenters to the NPRM having Directorate Identifier 2012-NM-101-AD (78 FR 78285, December 26, 2013) pointed out that in many cases the foreign manufacturer's service bulletin and the foreign authority's MCAI might have been issued some time before the FAA AD. Therefore, the DOA might have provided U.S. operators with an approved repair, developed with full awareness of the unsafe condition, before the FAA AD is issued. Under these circumstances, to comply with the FAA AD, the

operator would be required to go back to the manufacturer's DOA and obtain a new approval document, adding time and expense to the compliance process with no safety benefit.

Based on these comments, we removed the requirement that the DAH-provided repair specifically refer to this AD. Before adopting such a requirement, the FAA will coordinate with affected DAHs and verify they are prepared to implement means to ensure that their repair approvals consider the unsafe condition addressed in this AD. Any such requirements will be adopted through the normal AD rulemaking process, including notice-and-comment procedures, when appropriate.

We also have decided not to include a generic reference to either the "delegated agent" or "DAH with State of Design Authority design organization approval," but instead we have provided the specific delegation approval granted by the State of Design Authority for the DAH.

Conclusion

We reviewed the relevant data, considered the comments received, and determined that air safety and the public interest require adopting this AD with the changes described previously and minor editorial changes. We have determined that these minor changes:

- Are consistent with the intent that was proposed in the NPRM (78 FR 77615, December 24, 2013) for correcting the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM (78 FR 77615, December 24, 2013).

We also determined that these changes will not increase the economic burden on any operator or increase the scope of this AD.

Costs of Compliance

We estimate that this AD affects 383 airplanes of U.S. registry.

We estimate the following costs to comply with this AD:

Estimated costs				
Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Modification of the NLG trailing arm [retained actions from AD 2010-13-04, Amendment 39-16335 (75 FR 35622, June 23, 2010)]	3 work-hours X \$85 per hour = \$255	\$100	\$355	\$135,965
Installation of new pivot pin retention mechanism [new required action]	2 work-hours X \$85 per hour = \$170	None	\$170	\$65,110

According to the manufacturer, some of the costs of this AD may be covered under warranty, thereby reducing the cost impact on affected individuals. We do not control warranty coverage for affected individuals. As a result, we have included all costs in our cost estimate.

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator.

“Subtitle VII: Aviation Programs,” describes in more detail the scope of the Agency’s authority.

We are issuing this rulemaking under the authority described in “Subtitle VII, Part A, Subpart III, Section 44701: General requirements.” Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

We determined that this AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

1. Is not a “significant regulatory action” under Executive Order 12866;
2. Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979);
3. Will not affect intrastate aviation in Alaska; and
4. Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov/#!docketDetail;D=FAA-2013-1029>; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Operations office (telephone 800-647-5527) is in the ADDRESSES section.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by removing Airworthiness Directive (AD) 2010-13-04, Amendment 39-16335 (75 FR 35622, June 23, 2010), and adding the following new AD:

2014-25-01 Bombardier, Inc.: Amendment 39-18042. Docket No. FAA-2013-1029; Directorate Identifier 2013-NM-177-AD.

(a) Effective Date

This AD becomes effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

This AD replaces AD 2010-13-04, Amendment 39-16335 (75 FR 35622, June 23, 2010).

(c) Applicability

This AD applies to Bombardier, Inc. Model DHC-8-400, -401, and -402 airplanes, certificated in any category, serial numbers 4001 through 4435 inclusive.

(d) Subject

Air Transport Association (ATA) of America Code 32, Landing Gear.

(e) Reason

This AD was prompted by a report of several missing or damaged pivot pin retention bolts. We are issuing this AD to prevent failure of the pivot pin retention bolt, which could result in a loss of directional control or a nose landing gear (NLG) tire during take-off or landing.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Retained Actions and Compliance

This paragraph restates the requirements of paragraph (f)(1) of AD 2010-13-04, Amendment 39-16335 (75 FR 35622, June 23, 2010), with no changes. For airplanes having serial numbers 4001, 4003, 4004, 4006, and 4008 through 4238 inclusive: Within

2,000 flight hours after July 28, 2010 (the effective date of AD 2010-13-04), modify the NLG trailing arm by incorporating Bombardier Modification Summary 4-113599, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 84-32-65, Revision A, dated March 2, 2009.

(h) New Requirement of this AD: Installation of a New Pivot Pin Retention Mechanism

For airplanes having serial numbers 4001 through 4435 inclusive: Within 6,000 flight hours or 36 months after the effective date of this AD, whichever occurs first, install a new pivot pin retention mechanism by incorporating Bombardier Modification Summary 4-113749, in accordance with paragraph 3.B., “Procedure,” of the Accomplishment Instructions of Bombardier Service Bulletin 84-32-110, Revision A, dated April 8, 2013.

(i) Credit for Previous Actions

(1) This paragraph provides credit for actions required by paragraph (g) of this AD, if those actions were performed before July 28, 2010 (the effective date of AD 2010-13-04, Amendment 39-16335 (75 FR 35622, June 23, 2010)), using the Accomplishment Instructions of Bombardier Service Bulletin 84-32-65, dated December 17, 2008, which is not incorporated by reference in this AD.

(2) This paragraph provides credit for actions required by paragraph (h) of this AD, if those actions were performed before the effective date of this AD using Bombardier Service Bulletin 84-32-110, dated December 21, 2012, which is not incorporated by reference in this AD.

(j) Other FAA AD Provisions

The following provisions also apply to this AD:

(1) Alternative Methods of Compliance (AMOCs): The Manager, ANE-170, New York Aircraft Certification Office (ACO), FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the ACO, send it to ATTN: Program Manager, Continuing Operational Safety, FAA, New York ACO, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7300; fax 516-794-5531. Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office. The AMOC approval letter must specifically reference this AD.

(2) Contacting the Manufacturer: As of the effective date of this AD, for any requirement in this AD to obtain corrective actions from a manufacturer, the action must be accomplished using a method approved by the Manager, New York ACO, ANE-170, Engine and Propeller Directorate, FAA; or Transport Canada Civil Aviation (TCCA); or Bombardier, Inc.'s TCCA Design Approval Organization (DAO). If approved by the DAO, the approval must include the DAO-authorized signature.

(k) Related Information

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) Canadian Airworthiness Directive CF-2009-29R1, dated August 14, 2013, for related information.

You may examine the MCAI in the AD docket on the Internet at
<http://www.regulations.gov/#!documentDetail;D=FAA-2013-1029-0002>.

(2) Service information identified in this AD that is not incorporated by reference in this AD is available at the addresses specified in paragraphs (l)(5) and (l)(6) of this AD.

(l) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless this AD specifies otherwise.

(3) The following service information was approved for IBR on [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(i) Bombardier Service Bulletin 84-32-110, Revision A, dated April 8, 2013.

(ii) Reserved.

(4) The following service information was approved for IBR on July 28, 2010 (75 FR 35622, June 23, 2010).

(i) Bombardier Service Bulletin 84-32-65, Revision A, dated March 2, 2009.

(ii) Reserved.

(5) For service information identified in this AD, contact Bombardier, Inc., Q-Series Technical Help Desk, 123 Garratt Boulevard, Toronto, Ontario M3K 1Y5,

Canada; telephone 416-375-4000; fax 416-375-4539; email

thd.qseries@aero.bombardier.com; Internet <http://www.bombardier.com>.

(6) You may view this service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221.

(7) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to:

<http://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued in Renton, Washington, on November 28, 2014.

John P. Piccola, Jr.,
Acting Manager,
Transport Airplane Directorate,
Aircraft Certification Service.

[FR Doc. 2014-28923 Filed 12/11/2014 at 8:45 am; Publication Date: 12/12/2014]